UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte FRANK DUBNER, CHRISTOPH WECKBECKER,
HERMANN LOTTER, JOACHIM POHLISCH, FRIEDERIKE KAPPKE,
RALF KELLE, PAUL CALDWELL, and LEE F. KALIVODA

Appeal 2007-2375
Application 10/319,843
Technology Center 1700

Decided: September 11, 2007

Before TONI R. SCHEINER, DONALD E. ADAMS, and ERIC GRIMES, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to an animal feed composition. The Examiner has rejected the claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

BACKGROUND

The Specification describes "a shaped, in particular granulated feedstuffs additive containing L-lysine and treated with additives, preferably

oils, having an improved abrasion resistance" (Specification 1). Specifically, the Specification describes "substantially dust-free shaped animal feedstuffs additives . . . based on fermentation broth and containing L-lysine and preferably the major proportion of the further constituents of the fermentation broth" (*id.* at 2). The Specification states that the animal feedstuffs additives "contain L-lysine in a concentration of 30 to 90 wt.%," greater than or equal to "97 wt.% of the animal feedstuffs additive . . . has a mean particle size between > 0.1 and 1.8 mm," and the animal feedstuffs additives "contain on the surface an added additive in an amount of 0.02 to 2.0 wt.%" (*id.*). The Specification also states that "[f]ats and oils from the original product (optionally biomass and dissolved fractions from the fermentation broth), mak[e] up at most 6% of the weight" (*id.* at 4) and that the surface additive may be an edible oil, a silicone oil, or polyethylene glycol (*id.* at 6-7).

DISCUSSION

1. CLAIMS

Claims 34-51 are pending and on appeal. The claims have not been argued separately and therefore stand or fall together. 37 C.F.R. § 41.37(c)(1)(vii). We will focus on claim 34, which is representative and reads as follows:

34. A substantially dust-free animal feed composition obtained by fermentation, said composition comprising:

(a) an original granulated animal feed additive obtained by fermentation and containing biomass from said fermentation, wherein fats and oils in said original feed additive comprise less than 6% by weight;

(b) an additional compound on the surface of said original granulated feed additive in an amount of 0.02-2 wt% of the total weight of said dust-free animal feed composition, said additional compound being selected from the group consisting of: an edible oil; a silicone oil; and polyethylene glycol;

and wherein said substantially dust-free animal feed composition comprises L-lysine in an amount of 30-90 wt% based upon the total weight of said composition and wherein at least 97% of said substantially dust-free animal feed composition has a mean particle size of 0.1-1.8 mm.

2. PRIOR ART

The Examiner relies on the following references:

Ito	GB 2249466	May 13, 1992
Binder	US 5,431,933	Jul. 11, 1995
Beirne	GB 2293304	Mar. 27, 1996
Mori	EP 0743016	Nov. 20, 1996
Becker	US 5,814,501	Sep. 29, 1998
Simonsen	US 2002/0119201	Aug. 29, 2002

3. OBVIOUSNESS

Claims 34-51 stand rejected under 35 U.S.C. § 103 as obvious over Mori in view of Ito, Beirne, Simonsen, Becker, and Binder.[1] The Examiner relies on Mori for disclosing "mixing lysine containing fermentation broth granules and lysine granules with fatty acid ester salts . . . to obtain free-flowing compositions with less caking tendency" (Answer 4). The

[1] The Examiner relies on six references. However, because we conclude that the combination of Mori, Beirne, and Binder render claim 34 obvious, we need not discuss Ito, Simonsen, or Becker.

Examiner finds that the "mixing produces a granular feed additive with a surface being covered with the additional compound 'like that in a coating' ([Mori,] page 5, line 1)" and that the "particle size and amounts of lysine additive [in Mori] are the same [as the size and amounts claimed]" (*id.*).

The Examiner relies on Beirne for teaching "a dust-free powder-like or granular-like feed additive . . . which contains mineral oil, prepared by metering the additive and carrier into a mixer . . . and injecting an aerosol of oil and air so as to spray the mineral oil on the feed, so that the mineral oil adheres to the dust and a free-flowing formulation is obtained" (*id.* at 5). The Examiner finds that Beirne teaches that "dust causes loss of product, handling difficulties, difficulties in transportation and expensive storage facilities" (*id.*). The Examiner concludes that Beirne "provides motivation to combine the feed granule with oil to reduce dust and render it dust-free" (*id.*). The Examiner also finds that Beirne teaches the claimed amount of oil (*id.* at 9).

The Examiner relies on Binder for showing "an animal feed composition containing the fermentation broth or culture medium that contains fats to the extent of 1.7% and 2.8%" (*id.* at 6). The Examiner concludes that it "would have been obvious that the fermentation broth of [Mori] contains fat to the same extent since the original granulated animal feed additive shown by Binder et al. contains the same or a similar fermentation broth" (*id.*).

We agree that the Examiner has set forth a prima facie case of obviousness. Mori describes "mixing a granular feed additive containing from 30 to 90% by weight, on the dry basis, of amino acid(s) with fine

particles of a caking preven[ta]tive" (Mori 3: 3-5). Mori specifically describes using L-lysine in the feed additive "in a large amount" (*id.* at 3: 13-15). Mori also describes using a fermentation broth as a starting material for the granulation (*id.* at 3: 18-20). In addition, Mori states that 80 to 95% by weight of the granules have a particle size of from 300 to 5000 μm (0.3 to 5 mm) (*id.* at 4: 11-12).

Beirne states that dust in animal feed poses a general health hazard, as well as other problems (Beirne 3). To produce a substantially dust-free feed additive, Beirne describes adding an aerosol of mineral oil and air to a mixture of bulking carrier material and feed additive "so that the droplets of mineral oil adhere to the dust of the material" (*id.* at 4-5). Beirne states that the amount of mineral oil is "within a range of 0.25% to 2.0% by weight of the combined bulking carrier material and feed additives mixture" (*id.* at 5). Based on the teachings in Beirne, we agree with the Examiner that it would have been obvious to add mineral oil, in an amount of 0.25% to 2.0% by weight, to the granular feed additive of Mori in order to produce a substantially dust-free animal feed. In addition, we agree with the Examiner that adding mineral oil to the granular feed additive of Mori would result in mineral oil being present on the surface of the granular feed additive.

Binder describes "an animal feed supplement which contains at least one amino acid at a high concentration with only a small proportion of unwanted by-products" (Binder, col. 1, ll. 59-62). Specifically, Binder describes an animal feed supplement "based on fermentation broth," the dry mass of the supplement containing 40-90% by weight amino acid(s) and a maximum of 5% by weight fats and oils (*id.* at col. 2, ll. 9-18). Based on the

teachings in Binder, we agree with the Examiner that it would have been obvious to include a maximum of 5% by weight fats and oils in the granular feed additive of Mori.

Appellants argue that Mori "describes feeds that have been treated with additives . . . [that] are all different from the ones recited in Appellant[s'] claims and . . . applied to preparations for a different purpose, *i.e.*, the prevention of caking not the prevention of dust formation" (Br. 7). Appellants also argue that Mori does not describe that "the additives are applied to the surface of compositions" (*id.*). In particular, Appellants argue that the "additives that are discussed in [Mori] appear to be blended into compositions and not just applied to their surface" (Reply Br. 1). In addition, Appellants argue that the "caking preventative . . . appears to be made up of solid particles. This may be contrasted with [Appellants'] additives that are sp[r]ayed on the surface and which are therefore liquids." (*Id.* at 2.) Appellants also argue that "there are no teachings in [Mori] to suggest that compositions with a fat and oil content of less than 6% should receive 0.02-2% of additive and, in fact, the entire concept of basing additive concentration on fat and oil content is absent" (Br. 7).

We are not persuaded by these arguments. The Examiner is not relying on Mori to describe the surface additive of claim 34, the amount of this surface additive, or the amount of fat and oil. Instead, the Examiner is relying on Beirne and Binder for these features. "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. . . . [The reference] must be read, not in isolation, but for what it fairly teaches in

combination with the prior art as a whole." *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Appellants also argue that Beirne's "product has oil homogeneously distributed in the composition rather than as a coating on its surface" (Br. 7-8). Specifically, in Beirne, "fine particles are wetted with a mineral oil and then caked together to form larger particles" (Reply Br. 2). In addition, Appellants argue that, although Beirne discloses an amount of mineral oil "within a range of 0.25% to 2.0% by weight[,] . . . which overlaps the range specified in Appellants' claims[], the amount of fat and oil present is not indicated" (Br. 8).

We are not persuaded by these arguments. We agree with Appellants that Beirne describes wetting particles with a mineral oil and caking them together to form larger particles (Beirne 5) but, as the Examiner pointed out, this would result in mineral oil on the surface of the particles. Claim 34 does not exclude the presence of mineral oil within the particles. More importantly, we agree with the Examiner that injecting a mineral oil aerosol into a mixer containing Mori's granular feed additive would result in mineral oil on the surface of the additive.

Furthermore, the Examiner is not relying on Beirne for describing the amount of fat and oil present in the granules. There is no requirement that a single reference describe both the amount of fat and oil present in the granules and the amount of oil on their surface. "In determining whether obviousness is established by combining the teachings of the prior art, the test is what the combined teachings of the references would have suggested

to those of ordinary skill in the art." *In re GPAC Inc.*, 57 F.3d 1573, 1581 (1995) (internal quotations omitted).

In addition, Appellants argue that Binder does not "suggest the addition of any type of additive to the surface of the compositions to prevent dust formation. In fact, [Binder] do[es] not appear to recognize dust formation as a problem at all." (Br. 10.) Appellants also argue that "there is no suggestion that a composition having a fat and oil content of less than 6% should have 0.02-2% of oil or PEG added to its surface. Again, a relationship between the content of fats and oils and the amount of surface additive is simply not taught." (*Id.*)

We are not persuaded by these arguments. As pointed out by the Examiner, "Binder is not the only reference applied in this rejection" (Answer 10). For the reasons discussed above, we agree with the Examiner that the combination of Mori with Beirne and Binder would have suggested the animal feed composition of claim 34.

SUMMARY

We conclude that the Examiner has set forth a prima facie case that claim 34 would have been obvious in view of the applied references, which Appellants have not rebutted. We therefore affirm the rejection of claim 34 under 35 U.S.C. § 103. Claims 35-51 fall with claim 34.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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